

III.

MEMOIRS OF LITERATURE.

MONDAY, March 27, 1710.

To be continued Weekly.

THE Reception so many flying Papers have met with from the Publick, is an Effect of that Inquisitive Genius peculiar to the British Nation. The Indulgence of the Press to a decent Freedom of Enquiry, must naturally encourage some to gratify the Curiosity, and improve the Taste of the People. Hence we see Morals, Wit and Politicks retail'd, the Passions are reform'd, the Imagination and Judgment refin'd, and just Notions of the Liberties of Mankind establish'd. These Advantages have hitherto been furnish'd only from the Product of this Country; but the Demands of the Publick call for Additional Supplies. We have therefore, with great Difficulty and Expence, settled a Correspondence with the Commonwealth of Learning abroad, and undertaken to import the Growth of Foreign Parts. We shall plead then the Privilege of a late Act, to Naturalize the most Curious Pieces of Eloquence, Dissertations, Essays, Critical Remarks, &c. and take Notice of such Books as would otherwise escape the Observation of the Studious. In a word, The Reader may expect to find a very Early Account of whatever the Learned World shall be pleas'd to Communicate relating to Arts and Sciences.

I.

THE CHARACTER of M. Tschirnaus, late Member of the Royal Academy of Sciences, by M. de Fontenelle.

M. TSCIRNAUS was born in the Upper Saxony, April 10, 1651. being originally descended from a Noble Family of Moravia. In his Youth he had all the Advantages, which usually attend the Education of Quality; and made much greater Advances than could be expected from his Years. He was very Successful in all his Applications, especially in Geometry. At the Age of 17 he went to compleat the Course of his Studies at Leyden; where having gain'd many Friends and a great Reputation, he followed the Fortune of War during some Troubles which happen'd at that Time, but did not continue in the Service above 18 Months. Agreeably to the Custom of his Country, he began his Travels, and made a Tour into England, France, Italy, Sicily, and Malta, carefully observing where-e're he pass'd all Natural Curiosities, and such other Things worthy the Attention of a Philosopher: Being perswaded, that our Reason improves in proportion to our Experience and Observation.

After his Travels he went to Court; which a Philosopher should visit; if for no other Reason than to study a certain Turn of Thought and Air of Behaviour, not to be learn'd elsewhere. He came to Paris in 1682; where he brought his *Causticks*, a sort of Curve-Lines

which borrow his Name. These Curves generally bear the Name of their Inventer: The Spiral of *Archimedes*, the Conchoid of *Nicomedes*, the Cissoïd of *Diocles*, the *Causticks* of *Tschirnaus*, are all well known to Mathematicians; who think they acquire as much Glory by giving their Name to a Curve, as Princes do by Dignifying Cities with their own Names. He consulted the Academy about his new Curves; and at the Age of 31, was admitted a Member. His Discovery was the more remarkable, by being made before the Doctrine of Fluxions was known. After some Stay in this Town, he return'd to Holland; where he prepar'd his Book *De Medicina Corporis & Animi* for the Press. He had already compos'd several Works when very Young; but upon a Review, whilst they were Printing, he was so little satisfy'd with his Performance, that he made a Sacrifice of these first Essays of Youth: A Sacrifice so much the more considerable, as they are the Darling Offspring of the Mind, when its Ardour is as strong as the Judgment is weak. Then it was, he resolv'd not to publish any thing, till he was Thirty: After which time, he presented the World with the Book I have mention'd, and dedicated it to the King. It contains his *Causticks*, and such Instructions as he thought necessary to a Philosopher, for the Preservation of his Health, and the Conduct of his Mind. This was not a mean Theory, but conformable to his own Practice, and the whole Tenor of his Life. He devoted the Summer to making Experiments, the Winter to his Enquiries and Meditations, and the Autumn to his Health; Contenting himself with Projecting a Scheme of Study against the approaching Season. This being come, he retrench'd his Diet, went to Bed without

any Supper at Nine, and was awak'd at Two in the Morning. His Thoughts were employ'd upon his last Dream, which generally ran upon what had been the Subject of his Meditations, and so serv'd as an Introduction to his Studies. This looks somewhat Visionary; but great Passions generally border upon Superstition. His Application was so intense, that in the Night he us'd to see Sparks of Fire flash from his Eyes; and his Imagination was so vehement as to make him believe, he really saw the Same at Mid-day upon a Paper, which lay by him. Glory, the principal Motive to Learned Men, could never affect M. *Tschirnaus*. From the 24th Year of his Age, he renounc'd all other Pleasures but what accompany the Pursuit of Truth, which was the Object of his Disinterested Passion. The Advices, he gives in his Book for the Regimen of Health, relate to several Remedies against immoderate Eating and Drinking, the Fashionable Vices of his Countrey. Sweating was a *Panacea* with him; and every thing that was not nutritious, he esteem'd little better than Poyson. Upon his Return into *Saxony*, he apply'd himself to Opticks. Having obtain'd Leave of King *Augustus* to set up a Laboratory for making new Burning-Glasses of a very Large Sphere, he made one, which the Duke of *Orleans* purchased, of 160 Pound Weight; whose Two Convex Sides were Portions of a Sphere of 12 Feet Diameter. This Burning-Glass is still a Riddle to the Learned, who are uncertain whether it was melted in a Mold, or cut out by Engine; both of which are equally difficult to conceive. He said, he wrought it out of a Mass of Seven Hundred Pound Weight. The Emperor, willing to reward his Merit, offer'd him the Title of Free Baron; which he modestly refus'd, and only accepted the Present of his Majesty's Picture. He shew'd the same Indifference for Honour, when King *Augustus* would have confer'd upon him the Title of Counsellor of State. He return'd to *Paris* in 1701. and communicated his Methods to the Academy, suppressing the Demonstration which he made a Secret; and seem'd to glory, that he could dispense with the Use of Fluxions. But perhaps nothing can be more to the Advantage of this Method, than that it should be thought an Honour to make a shift without it. His Diligence in Collecting all that was Curious in Natural Philosophy, made him exchange with Mr. *Homburg* for some Chymical Secrets, his Art of making Porcelain, upon Condition not to publish it during his Life. 'Twas always thought the Workmanship depended on a particular Kind of Earth, no where to be found but in *China* or *Japan*; till he discover'd that the Matter, of which Porcelain consists, is a sort of Earth to be met with in all Places. In this he may be said to deserve more Glory than the Inventer himself: For he, that first hits upon a Secret, is oft-times beholden to mere Chance; whereas M. *Tschirnaus* was oblig'd to nothing but his own Enquiries.

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It has been lately design'd and engraved at large by Mademoiselle le Hay; so that every body may have a full View of that Master-piece of Art, which before lay conceal'd in its Smallness. Her Design is so correct and elegant, and she has so well preserved the Taste of Antiquity, that Persons of the highest Rank, the best Judges in *Paris*, and the King himself, have been extremely pleas'd with her Performance. 'Tis an Advantage to the Publick, that her Taste inclines her to make the Beauties of those wonderful Works of Antiquity perspicuous to our Senses, which would otherwise escape our Sight by Reason of their Smallness. It may be said that she forms a new World out of artificial Atoms.

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Mademoiselle le Hay, mention'd by *Father Tournemine*, has engrav'd many other Stones like this. She has also design'd the Greek Medaillons of the late *M. Vaillant*, whose Cabinet has been bought up by her Husband. There are many Medals in it unknown to the best French Antiquarians. *M. le Hay* intends to send Impresses of those Medals to the Learned in Foreign Countries, to have their Thoughts upon them.

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III.

AN ACCOUNT of a Dissertation of *M. de Reaumur* concerning the Formation and Growth of Shells, lately read in the Royal Academy of Sciences.

THIS Dissertation appear'd the more curious, as being a Subject scarce ever treated of before, though Collections of Shells have been for a long time the Admiration of the Learned, and the greatest Ornament of their Cabinets. *M. de Reaumur* having no Books to consult, applied himself to the Consideration of Nature, which taught him how Shells grow; from whence one may easily judge of their Formation. All Bodies grow, either by Vegetation, as Plants and Animals, or by a successive Application of Parts one upon another, which is call'd *Juxta-position*. Those who believe that every thing vegetates in Nature, will positively affirm that Shells grow

by Vegetation, as the Fishes contain'd in them. But *M. de Reaumur* has found out by his Experiments upon several sorts of Shells, that they grow only by *Juxta-position*. He only mention'd the Experiments he had made upon the Shells of Snails, which perfectly agree with those he made upon Sea-Shells. *M. de Reaumur* is of Opinion, that Shells grow out of Stony and Viscous Matter, in the same manner as those stony Crusts to be seen in many Conduits, which convey Water into Fish-Ponds, particularly in those that convey the Waters of *Arcueil*. 'Tis plain the Water drives those stony Particles against the Sides of the Conduits; and if the same Conduits were like Sieves, those stony Particles wou'd get through the Holes, and form in the out-side a more solid and thicker Crust than that which is in the in-side; because it would not be expos'd to the continual Friction of running Water. The Fluids, that circulate in the Bodies of Shell-Fish, carrying along with them viscous and stony Particles, must needs drive 'em against the sides of the Conduits: these having an infinite Number of Pores, transmit that Matter, which forms a Crust on the Outside, that proves the first Lay of a piece of Shell. This is succeeded by a second and a third, till the Shell gets a certain Thickness. The Growth of the Animal occasions the Production of another Piece of Shell, and so on, till it ceases to grow.

M. de Reaumur made this Mechanism very plain by Experiments. First, 'tis visible that the Body of a Snail grows before its Shell. In the second Place, if one breaks a piece of a Snail-shell, and puts the Animal into a Vessel where it may be easily observed, it will immediately stick to the Sides of the Vessel; and then one may see a Liquor, which thickens and co-agulates, and forms upon the part of the Animal, that lies open, a very thin Skin, not unlike a Cob-web, which generally appears within four and twenty Hours. This first Lay thickens in a few Days, and in ten or twelve Days time the Shell has its due Consistence.

It plainly appears from this Experiment that the Shell does not vegetate; since the Hole that is made in it, closes up again all at once, not by Degrees, as bruised Bones and Wounds.

But the following Experiments undeniably prove *M. de Reaumur's* Opinion. He made a great Hole in a Snail-shell, and then insinuated into that Hole a little piece of Glove-skin, which he glued to the inward Surface of the Shell. This being done, that side of the Skin, which touch'd the Body of the Animal, became incrustated with a Shell, and nothing was formed upon the outward Surface: Which shews that the Shell did not vegetate.

Besides, *M. de Reaumur* broke the upper part of several such Shells, and glued upon the inward Edge of the Winding of the Shell a piece of Glove-skin, which he turn'd over the outward Surface. Were it true that Shells vegetate, this shou'd have pierced through the Glove-Skin, or ceased to grow; but on the contrary, the Skin remain'd glued between the new piece of Shell and the old one, which consequently did not at all contribute to this new Formation.

'Tis easy to conceive, how the small Particles of solid Matter can form a Snail-Shell, since *M. de Reaumur* has made the following Experiment. He pounded and sifted some of these Shells, and having sprinkled Vinegar turn'd them into a Paste, which being dried, grew pretty hard. There are two Difficulties in this System, which ought to be answered.

The first consists in explaining the Variety of Colours; that is to be seen in one and the same Shell. *M. Reaumur* has observed, That the different Colours of a Snail-Shell are like those which appear on the Collar of that Animal; and that therefore the Matter, which produces them, passes thro' the Pores of the Animal, proper to effect those different Colours. This is confirm'd by Experience: For that Part of the Shell which grows upon the Collar of a Snail over against the brown or black Streaks, is likewise of the same Colour; whereas that which grows over the rest of the Body, is white. The same Reason may easily be apply'd to all other Sorts of Shells.

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AN ACCOUNT of a Dissertation of *M. de Reaumur* concerning the Formation and Growth of Shells, lately read in the Royal Academy of Sciences.

THIS Dissertation appear'd the more curious, as being a Subject scarce ever treated of before, though Collections of Shells have been for a long time the Admiration of the Learned, and the greatest Ornament of their Cabinets. *M. de Reaumur* having no Books to consult, applied himself to the Consideration of Nature, which taught him how Shells grow; from whence one may easily judge of their Formation. All Bodies grow, either by Vegetation, as Plants and Animals, or by a successive Application of Parts one upon another, which is call'd *Juxta-position*. Those who believe that every thing vegetates in Nature, will positively affirm that Shells grow

by Vegetation, as the Fishes contain'd in them. But *M. de Reaumur* has found out by his Experiments upon several sorts of Shells, that they grow only by *Juxta-position*. He only mention'd the Experiments he had made upon the Shells of Snails, which perfectly agree with those he made upon Sea-Shells. *M. de Reaumur* is of Opinion, that Shells grow out of Stony and Viscous Matter, in the same manner as those stony Crusts to be seen in many Conduits, which convey Water into Fish-Ponds, particularly in those that convey the Waters of *Arcueil*. 'Tis plain the Water drives those stony Particles against the Sides of the Conduits; and if the same Conduits were like Sieves, those stony Particles would get through the Holes, and form in the out-side a more solid and thicker Crust than that which is in the in-side; because it would not be expos'd to the continual Friction of running Water. The Fluids, that circulate in the Bodies of Shell-Fish, carrying along with them viscous and stony Particles, must needs drive 'em against the sides of the Conduits: these having an infinite Number of Pores, transmit that Matter, which forms a Crust on the Outside, that proves the first Lay of a piece of Shell. This is succeeded by a second and a third, till the Shell gets a certain Thickness. The Growth of the Animal occasions the Production of another Piece of Shell, and so on, till it ceases to grow.

M. de Reaumur made this Mechanism very plain by Experiments. First, 'tis visible that the Body of a Snail grows before its Shell. In the second Place, if one breaks a piece of a Snail-shell, and puts the Animal into a Vessel where it may be easily observed, it will immediately stick to the Sides of the Vessel; and then one may see a Liquor, which thickens and coagulates, and forms upon the part of the Animal, that lies open, a very thin Skin, not unlike a Cob-web, which generally appears within four and twenty Hours. This first Lay thickens in a few Days, and in ten or twelve Days time the Shell has its due Consistence.

It plainly appears from this Experiment that the Shell does not vegetate; since the Hole that is made in it, closes up again all at once, not by Degrees, as bruised Bones and Wounds.

But the following Experiments undeniably prove *M. de Reaumur's* Opinion. He made a great Hole in a Snail-shell, and then insinuated into that Hole a little piece of Glove-skin, which he glued to the inward Surface of the Shell. This being done, that side of the Skin, which touch'd the Body of the Animal, became incrustated with a Shell, and nothing was formed upon the outward Surface: Which shews that the Shell did not vegetate.

Besides, *M. de Reaumur* broke the upper part of several such Shells, and glued upon the inward Edge of the Winding of the Shell a piece of Glove-skin, which he turn'd over the outward Surface. Were it true that Shells vegetate, this should have pierced through the Glove-Skin, or ceased to grow; but on the contrary, the Skin remain'd glued between the new piece of Shell and the old one, which consequently did not at all contribute to this new Formation.

'Tis easy to conceive, how the small Particles of solid Matter can form a Snail-Shell, since *M. de Reaumur* has made the following Experiment. He pounded and sifted some of these Shells, and having sprinkled Vinegar turn'd them into a Paste, which being dried, grew pretty hard. There are two Difficulties in this System, which ought to be answered.

The first consists in explaining the Variety of Colours; that is to be seen in one and the same Shell. *M. Reaumur* has observed, That the different Colours of a Snail-Shell are like those which appear on the Collar of that Animal; and that therefore the Matter, which produces them, passes thro' the Pores of the Animal, proper to effect those different Colours. This is confirm'd by Experience: For that Part of the Shell which grows upon the Collar of a Snail over against the brown or black Streaks, is likewise of the same Colour; whereas that which grows over the rest of the Body, is white. The same Reason may easily be apply'd to all other Sorts of Shells.

The

The Second Difficulty, and the most perplexing, lies in the unequal Folding of some Shells. 'Tis certain that Folding must needs alter, according to the different Winding of the Animal. Many probable Reasons may be given of that Alteration. *M. de Reaumur* mention'd those he judged most agreeable to his Opinion; and explain'd in a very ingenious manner the Protuberances, the Channelling, and other Inequalities, to be seen in different Sorts of Shells.

IV.

AN ACCOUNT of the Life and Writings of the late Father Ruinart.

DOM THIERRY RUINART, born at Reims, of a good Family, was admitted very young into the Congregation of *St. Maur*. After he had gone thro' his School-Learning, he apply'd himself to the Study of the Holy Scripture, and to the Reading of the Fathers and Ecclesiastical Writers; wherein he made so great a Progress, that in the Year 1682. Father *Mabillon* chose him, as one who would be serviceable to him in his great Labours, and duly qualify'd to prosecute them in Time. *Dom Thierry* improv'd so much under such a Master, that in 1690. he publish'd the Genuine Acts of Martyrs, a Work that met with a General Approbation. He added to it a Learned Preface; wherein he made it his Chief Business to confute an unheard-of Paradox advanc'd by *Mr. Dodwell*, in his Dissertation entitled, *De Paucitate Martyrum*. That Piece remains unanswer'd to this Day.

In 1694. he put out a Correct Edition of the History of the Persecution of the *Vandals*, written by *Victor Vitensis*: To which he added several New Pieces, with Learned Notes concerning the *African Churches*.

In 1699. he printed the Works of *Gregorius Turonensis*, Revis'd and Corrected from several MSS. and added to them *Fredegarius*, and some Ancient Chronicles, with Notes to clear many Difficulties.

In 1700. he and Father *Mabillon* publish'd the Sixth Century of the Acts of the Saints of *St. Benedict's Order*, in Two Volumes in Folio.

LUCCA.

A Collection of the best Pieces of Italian Poetry, written in this Age, has been lately publish'd by *M. Lipi*. *Rime Scelte di Poeti illustri de nostri tempi*. 'Tis a Book in 8vo. of 407 Pages.

STRASBURG.

M. Khunius, Rector of our University, Professor of History and Eloquence, and Canon of *St. Thomas*, has newly publish'd the Latin Discourse pronounc'd by him in Honour of *Lewis XIV.* on the Birth-Day of that Prince.

Panegyricus Ludovico XIV. Galliarum Regi, in solenni Natalis Regii Celebratione, Anno 1709 nomine Universitatis Argentoratensis jussu publico datus. Fol. Pag. 27.

The Orator shews, that the Victories, obtain'd by the Enemy over the King's Armies, have not lessen'd his Grandeur; and that he is as Great in Adversity, as he was in Prosperity. *Ludovicum per ipsas hostium victorias magnum.* This is the Subject of the Panegyrick.

PARIS.

'TIS no small Advantage to the Ingenious, who are not skill'd in the Learned Languages, to have the most excellent Works of the Ancients translated by able hands, that know how to preserve in their Versions all the Beauty of the Original; and 'tis a great Satisfaction, when they are sure to find in their own Tongue the valuable Pieces they cannot read in Greek or Latin. The Abbot *Reignier Desmarais* has lately procured this Advantage to the Publick by his French Translation of *Cicero's Books de Divinatione*, which no less deserved to be translated into our Language, than many other Pieces of the same Author, that have appear'd in a French dress.

The ingenious Translator observes, that *Cicero* seems to have united in this Work all the several sorts of Eloquence. For, says he, the Ornaments of Oratory, and even the Pathetick, appear in some places of the First Book,

In 1702. he printed a French Apology for the Mission of *St. Maur* in France; wherein he proves that *St. Maur*, Abbot of *Glanfeuil*, is the Disciple of *St. Benedict* mention'd by Pope *Gregory I.* in his Dialogues. He added a Dissertation concerning *St. Placidus*; wherein he shews, that this Disciple of *St. Benedict* was sent into Sicily, where he suffer'd Martyrdom.

In 1706. he put out a Dissertation entitled, *Ecclesia Parisiensis vindicata*, against Father *German*, to vindicate the Charter of *Vandemire* and *Erchamberte*.

After the Death of Father *Mabillon*, he publish'd an Abridgment of his Life, out of respect for the Memory of his Master, and to comply with the Desires of several Persons of Note.

In the same Year, he went about the New Edition of Father *Mabillon's Book De Re Diplomatica*; which was publish'd with many Additions, made by the Author and himself, and a large Preface. At the same time, he put the last Hand to the Fifth Volume of the Annals of the Order of *St. Benedict*, which Father *Mabillon* had finish'd sometime before his Death. He also prepar'd for the Press the last Volume of the Acts of the Saints of that Order. He went into Champagne, to search the Archives of the Churches and Abbies of that Province, in Order to get New Materials that might be inserted in the Continuation of the History of the *Benedictins*. Upon his Return, he fell Sick in the Abbey of *Hautvillers*, where he died, (after he had been Sick of a continual Fever Nineteen Days,) on the 29th of September, 1709. at 53 Years of Age. He had been a Monk 35 Years.

His Works, well known to the Learned, make it appear that he was a worthy Disciple of Father *Mabillon*. They discover a Great Judgment, a Sound Critick, an Extraordinary Accuracy, a Neat and Correct Style; but above all, a Character of Simplicity and Modesty like that of his Master. He made him the Pattern of his Studies; but he was still more careful to follow his Good Example: So that notwithstanding the Great Labours wherein he was engag'd for many Years, he always liv'd a Regular Life, and carefully discharg'd the Duties of a Religious State; in which he no less distinguish'd himself by all manner of Virtues, than among the Learned by his great Erudition.

wherein his Brother undertakes to vindicate Divination in a continued Strain of Pleading. "In the Second Book, *Cicero* answers his Brother with great Strength, Elegance, and Exactness; and because the whole Matter is only debated between Two Persons, perfectly acquainted with the State of the Question, their Discourse is so close and concise as to admit of no Superfluity.

Besides some short Notes, which the Abbot has inserted in the Margins, there are large Remarks at the end of the Book, wherein he explains the Matter treated of in this Work, and gives an account of the Persons and Historical Facts mention'd by *Cicero*.

He has translated into French Rhyme the Latin Verses, interspersed through this Work, most of which are of *Cicero's* own making; whose Poetry, says he, is generally as little esteem'd, as his Eloquence is highly commended. He endeavours to remove this Prejudice, and maintains that, excepting *Virgil's Poetry*, there are few Latin Verses so fine as *Cicero's*.

The late Bishop of Meaux has left behind him several Books ready for the Press, besides his *Politicks taken from the very Words of the Scripture*; viz. *A Compendious History of the Kings of France. A Treatise concerning the Knowledge of God, and of one's Self. A Logick, and a Treatise of Morals, for the Dauphin. Meditations upon the Gospel. Ejaculations upon the Myseries, &c.*

Father *Lamy* being sensible, that the most effectual Means to Reclaim Unbelievers, is to shew them the Reasonableness of Reveal'd Religion, since they will admit of no Principle, but what is agreeable to Reason, has publish'd a Book in 120. wherein he attacks them with their own Weapons.

L'Incredule amené à la Religion par la Raison, en quelques Entretiens où l'on traite de l'alliance de la Raison avec la Foy.

AMSTERDAM.

M. Limborch is Printing a Latin Commentary in Folio upon the Acts of the Apostles, and the Epistles to the Romans and Hebrews.